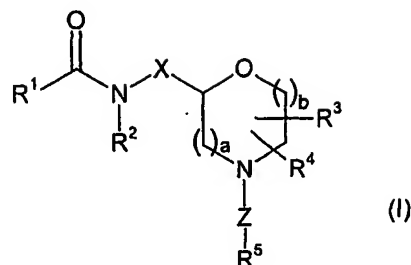


CLAIMS

1. A compound of formula (I):



wherein:

5 R^1 represents C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{2-6} alkynyl- Y^1 -, aryl- Y^1 -, heteroaryl- Y^1 -, aryl-(O)_i-aryl- Y^1 -, aryl-(O)_i-heteroaryl- Y^1 -, heteroaryl-(O)_i-aryl- Y^1 -, heteroaryl-(O)_i-heteroaryl- Y^1 -, C_{2-6} alkenyl- Y^1 -, aryl-O- Y^1 -, heteroaryl-O- Y^1 -, C_{1-6} alkyl-SO₂- Y^1 -, M- Y^1 -, J²- Y^1 -, -CN or C_{3-8} cycloalkyl- Y^1 - or C_{3-8} cycloalkenyl- Y^1 -, which cycloalkyl or cycloalkenyl may be optionally substituted by one or more hydroxyl or C_{1-6} alkyl groups;

10 R^2 represents hydrogen or C_{1-6} alkyl;

X represents ethylene or a group of formula CR^eR^f wherein R^e and R^f independently represent hydrogen or C_{1-4} alkyl or R^e and R^f may together with the carbon atom to which they are attached form a C_{3-8} cycloalkyl group;

R^3 and R^4 independently represent hydrogen or C_{1-4} alkyl;

15 Z represents a bond, CO, SO₂, $CR^gR^g(CH_2)_n$, $(CH_2)_nCR^gR^g$, $CHR^g(CH_2)_nO$, $CHR^g(CH_2)_nS$, $CHR^g(CH_2)_nOCO$, $CHR^g(CH_2)_nCO$, $COCHR^g(CH_2)_n$ or SO₂ $CHR^g(CH_2)_n$;

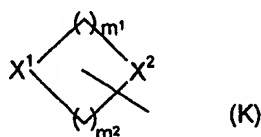
R^5 represents C_{1-6} alkyl, C_{2-6} alkenyl, aryl, heteroaryl, aryl- C_{2-6} alkenyl- or a group of formula $-Y^2-J^1$;

R^6 represents hydrogen, C_{1-4} alkyl, $CONR^7R^8$ or $COOC_{1-6}$ alkyl;

20 a and b represent 1 or 2, such that a+b represents 2 or 3;

n represents an integer from 0 to 4;

J¹ and J² independently represent a moiety of formula (K):



wherein X^1 represents oxygen, NR^{13} or sulphur, X^2 represents CH_2 , oxygen, NR^{10} or sulphur, m^1 represents an integer from 1 to 3 and m^2 represents an integer from 1 to 3, provided that m^1+m^2 is in the range from 3 to 5, also provided that when both X^1 and X^2 represent oxygen, NR^{13} , NR^{10} or sulphur, m^1 and m^2 must both not equal less than 2, wherein K is optionally substituted by one or more $-Y^3$ -aryl, $-Y^3$ -heteroaryl, $-Y^3$ -CO-aryl, $-COC_{3-8}$ cycloalkyl, $-Y^3$ -CO-heteroaryl, $-C_{1-6}$ alkyl, $-Y^3$ -COOC₁₋₆ alkyl, $-Y^3$ -COC₁₋₆ alkyl, $-Y^3$ -W, $-Y^3$ -CO-W, $-Y^3$ -NR¹¹R¹², $-Y^3$ -CONR¹¹R¹², hydroxy, oxo, $-Y^3$ -SO₂NR¹¹R¹², $-Y^3$ -SO₂C₁₋₆ alkyl, $-Y^3$ -SO₂aryl, $-Y^3$ -SO₂heteroaryl, $-Y^3$ -NR¹⁴C₁₋₆ alkyl, $-Y^3$ -NR¹⁴SO₂C₁₋₆ alkyl, $-Y^3$ -NR¹⁴CONR¹¹R¹², $-Y^3$ -NR¹⁴COOR¹⁵ or $-Y^3$ -OCONR¹¹R¹² groups, and is optionally fused to a monocyclic aryl or heteroaryl ring;

R^7 , R^8 , R^9 , R^{10} , R^{13} , R^{14} and R^{15} independently represent hydrogen or C_{1-6} alkyl;

R^{11} and R^{12} independently represent hydrogen or C_{1-6} alkyl or R^{11} and R^{12} together with the nitrogen atom to which they are attached may form a morpholine, piperidine or pyrrolidine ring;

M represents a C_{3-8} cycloalkyl or a C_{3-8} cycloalkenyl group fused to a monocyclic aryl or monocyclic heteroaryl group;

W represents a saturated or unsaturated, non-aromatic 5-7 membered ring containing between 1 and 3 heteroatoms selected from nitrogen, oxygen or sulphur, optionally substituted with one or more C_{1-6} alkyl, halogen or hydroxy groups;

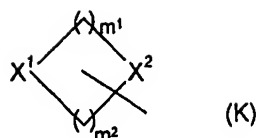
t represents 0 or 1.

Y^1 , Y^2 and Y^3 independently represent a bond or a group of formula $-(CH_2)_pCR^cR^d(CH_2)_q-$ wherein R^c and R^d independently represent hydrogen or C_{1-4} alkyl or R^c and R^d may together with the carbon atom to which they are attached form a C_{3-8} cycloalkyl group, and p and q independently represent an integer from 0 to 5 wherein $p + q$ is an integer from 0 to 5;

and salts and solvates thereof.

2. A compound of formula (I) according to claim 1 wherein R^1 represents C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{2-6} alkynyl- Y^1 -, aryl- Y^1 -, heteroaryl- Y^1 -, aryl-(O)_t-aryl- Y^1 -, aryl-(O)_t-heteroaryl- Y^1 -, heteroaryl-(O)_t-aryl- Y^1 -, heteroaryl-(O)_t-heteroaryl- Y^1 -, C_{2-6} alkenyl- Y^1 -, aryl-O- Y^1 -, heteroaryl-O- Y^1 -, C_{1-6} alkyl-SO₂- Y^1 -, M- Y^1 - or C_{3-8} cycloalkyl- Y^1 - or C_{3-8} cycloalkenyl- Y^1 -, which cycloalkyl or cycloalkenyl may be optionally substituted by one or more hydroxyl or C_{1-6} alkyl groups; and

J^1 represents a moiety of formula (K):

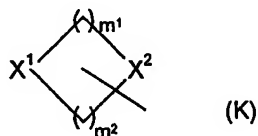


wherein X^1 represents oxygen, NR^{13} or sulphur, X^2 represents CH_2 , oxygen, NR^{10} or sulphur, m^1 represents an integer from 1 to 3 and m^2 represents an integer from 1 to 3, provided that m^1+m^2 is in the range from 3 to 5, also provided that when both X^1 and X^2 represent oxygen, NR^{13} , NR^{10} or sulphur, m^1 and m^2 must both not equal less than 2, wherein K is optionally substituted by one or more $-Y^3$ -aryl, $-Y^3$ -heteroaryl, $-Y^3$ -CO-aryl, $-Y^3$ -CO-heteroaryl, $-C_{1-6}$ alkyl, $-Y^3$ -COOC₁₋₆ alkyl, $-Y^3$ -COC₁₋₆ alkyl, $-Y^3$ -W, $-Y^3$ -CO-W, $-Y^3$ -NR¹¹R¹², $-Y^3$ -CONR¹¹R¹², hydroxy, oxo, $-Y^3$ -SO₂NR¹¹R¹², $-Y^3$ -SO₂C₁₋₆ alkyl, $-Y^3$ -SO₂aryl, $-Y^3$ -SO₂heteroaryl, $-Y^3$ -NR¹⁴C₁₋₆ alkyl, $-Y^3$ -NR¹⁴SO₂C₁₋₆ alkyl, $-Y^3$ -NR¹⁴CONR¹¹R¹², $-Y^3$ -NR¹⁴COOR¹⁵ or $-Y^3$ -OCONR¹¹R¹² groups, and is optionally fused to a monocyclic aryl or heteroaryl ring.

3. A compound of formula (I) according to claim 1 wherein R^1 represents C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, aryl- Y^1 -, heteroaryl- Y^1 -, aryl-(O)_t-aryl- Y^1 -, aryl-(O)_t-heteroaryl- Y^1 -, heteroaryl-(O)_t-aryl- Y^1 -, heteroaryl-(O)_t-heteroaryl- Y^1 -, C_{2-6} alkenyl- Y^1 -, aryl-O- Y^1 -, heteroaryl-O- Y^1 -, C_{1-6} alkyl-SO₂- Y^1 -, M- Y^1 - or C_{3-8} cycloalkyl- Y^1 - or C_{3-8} cycloalkenyl- Y^1 -, which cycloalkyl or cycloalkenyl may be optionally substituted by one or more hydroxyl or C_{1-6} alkyl groups;

Z represents a bond, CO, $CR^9R^6(CH_2)_n$, $CHR^6(CH_2)_nO$, $CHR^6(CH_2)_nS$, $CHR^6(CH_2)_nOCO$, $CHR^6(CH_2)_nCO$; and

J^1 represents a moiety of formula (K):



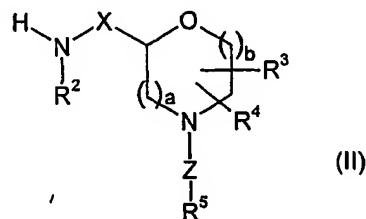
wherein X^1 represents oxygen, nitrogen, NR^{13} or sulphur, X^2 represents CH_2 , oxygen, nitrogen, NR^{10} or sulphur, m^1 represents an integer from 1 to 3, m^2 represents an integer from 1 to 3, provided that m^1+m^2 is in the range from 3 to 5, also provided that when X^2 represents oxygen, nitrogen, NR^{10} or sulphur, m^1 and m^2 must both not equal less than 2, wherein K is optionally substituted by one or more $-Y^3$ -aryl, $-Y^3$ -heteroaryl, $-Y^3$ -CO-aryl, $-Y^3$ -CO-heteroaryl, $-C_{1-6}$ alkyl, $-Y^3$ -COOC₁₋₆ alkyl, $-Y^3$ -COC₁₋₆ alkyl, $-Y^3$ -W, $-Y^3$ -CO-W, $-Y^3$ -NR¹¹R¹², $-Y^3$ -CONR¹¹R¹², hydroxy, oxo, $-Y^3$ -SO₂NR¹¹R¹², $-Y^3$ -SO₂C₁₋₆ alkyl, $-Y^3$ -SO₂aryl, $-Y^3$ -SO₂heteroaryl, $-Y^3$ -NR¹⁴C₁₋₆ alkyl, $-Y^3$ -NR¹⁴SO₂C₁₋₆ alkyl, $-Y^3$ -NR¹⁴CONR¹¹R¹², $-Y^3$ -

NR¹⁴COOR¹⁵ or -Y³-OCONR¹¹R¹² groups, and is optionally fused to a monocyclic aryl or heteroaryl ring.

4. A compound of formula (I) according to any one of claims 1 to 3 wherein R¹ represents aryl-Y¹-.
- 5 5. A compound of formula (I) according to claim 4 wherein R¹ represents optionally substituted phenyl-Y¹- in which phenyl may be optionally substituted.
6. A compound of formula (I) according to any one of claims 1 to 5 wherein Y¹ represents -CH₂-.
7. A compound of formula (I) according to claim 1 wherein X represents methylene.
- 10 8. A compound of formula (I) according to claim 1 wherein a and b both represent 1.
9. A compound of formula (I) according to claim 1 or claim 3 wherein Z represents a bond, CO, CHR⁶(CH₂)_n, CHR⁶(CH₂)_nO or CHR⁶(CH₂)_nCO.
10. A compound of formula (I) according to claim 9 wherein Z represents CH₂.
11. A compound of formula (I) according to claim 1 wherein R⁶ represents phenyl
- 15 optionally substituted with one or more halogen atoms.
12. A compound of formula (I) according to claim 11 wherein R⁶ represents 3,4-dichlorophenyl.
13. A compound of formula (I) according to any one of claims 1 to 12 as described in Examples 1 to 240 or a salt or solvate of any one thereof.
- 20 14. A compound of formula (I) according to claim 13 which is 2-[3-(Aminosulfonyl)phenyl]-N-[(2S)-4-(3,4-dichlorobenzyl)morpholin-2-yl]methyl]acetamide or a solvate thereof.
15. A pharmaceutical composition comprising a compound of formula (I) as defined in any one of claims 1 to 14 or a pharmaceutically acceptable salt or solvate thereof in
- 25 admixture with one or more pharmaceutically acceptable diluents or carriers.
16. A compound of formula (I) as defined in any one of claims 1 to 14 or a pharmaceutically acceptable salt or solvate thereof for use as a pharmaceutical.
17. Use of a compound of formula (I) as defined in any one of claims 1 to 14 or a pharmaceutically acceptable salt or solvate thereof in the manufacture of a medicament for
- 30 the treatment of inflammatory diseases.
18. A method of treatment or prophylaxis of inflammatory diseases eg. asthma which comprises administering to a patient an effective amount of a compound of formula (I) as defined in any one of claims 1 to 14 or a pharmaceutically acceptable salt or solvate thereof.

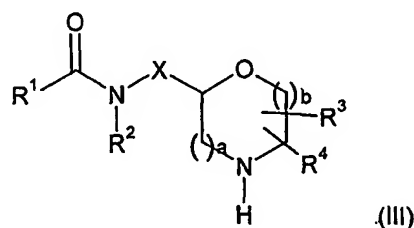
19. A process for preparing a compound of formula (I) according to any one of claims 1 to 14 which comprises:

(a) acylation of a compound of formula (II)



5 wherein R², R³, R⁴, R⁵, X, Z, a and b are as defined in claim 1, with a compound of formula R¹COOH or an activated derivative thereof, wherein R¹ is as defined in claim 1; or

(b) reacting a compound of formula (III)



10 wherein R¹, R², R³, R⁴, X, a and b are as defined in claim 1, with a compound of formula L¹-Z-R⁵, wherein Z and R⁵ are as defined in claim 1 and L¹ represents a suitable leaving group; or

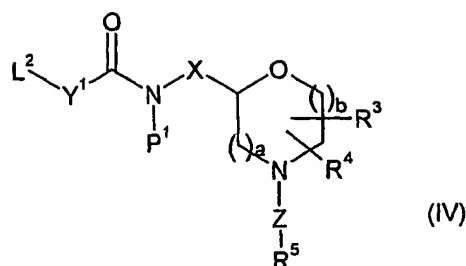
(c) deprotecting a compound of formula (I) which is protected; or

(d) interconversion of other compounds of formula (I).

20. A process for preparing a compound of formula (I) according to any one of claims 1 to 14 which comprises:

15 (e) forming a compound of formula (I) wherein R¹ represents heteroaryl-Y¹-, aryl-(O)_t-heteroaryl-Y¹- or heteroaryl-(O)_t-heteroaryl-Y¹- (wherein said Y¹ group is attached to heteroaryl via a heterocyclic nitrogen atom) and R² represents hydrogen which comprises reacting a compound of formula (IV)

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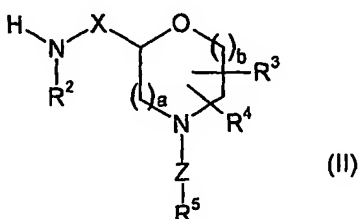


or a protected derivative thereof wherein R^3 , R^4 , R^5 , X , Y^1 , Z , a and b are as defined in claim 1, L^2 represents a suitable leaving group, such as a halogen atom eg. bromine and P^1 represents a solid phase resin bound protecting group, with a heterocyclic compound defined by the R^1 groups heteroaryl, aryl-(O)_t-heteroaryl or heteroaryl-(O)_t-heteroaryl above wherein said heteroaryl group contains at least one NH atom, followed by removal of the solid phase resin bound protecting group; or

(f) forming a compound of formula (I) wherein Z represents $CR^9R^8(CH_2)_n$ and R^9 represents hydrogen which comprises reacting a compound of formula (III) or a protected derivative thereof with a compound of formula $R^8CO(CH_2)_nR^5$, followed by reduction of the resultant imine; or

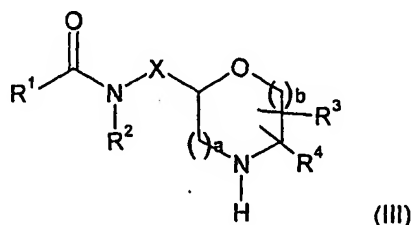
(g) forming a compound of formula (I) wherein Z represents CO by reacting a compound of formula (III) or a protected derivative thereof with a compound of formula R^5COOH or an activated derivative thereof.

21. A compound of formula (II)



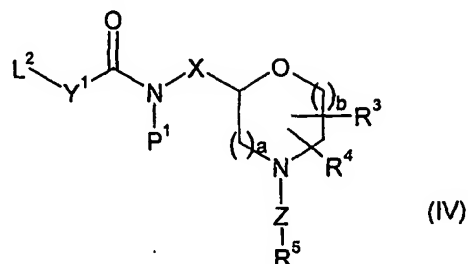
wherein R^2 , R^3 , R^4 , R^5 , X , Z , a and b are as defined in claim 1 or a protected derivative thereof, or a salt or solvate thereof.

22. A compound of formula (III)



wherein R^1 , R^2 , R^3 , R^4 , X , a and b are as defined in claim 1 or a protected derivative thereof, or a salt or solvate thereof.

23. A compound of formula (IV)



- 5 wherein R^3 , R^4 , R^5 , X , Y^1 , Z , a and b are as defined in claim 1, L^2 represents a suitable leaving group, such as a halogen atom eg. bromine and P^1 represents a solid phase resin bound protecting group, or a salt or solvate thereof.